



ATLAS

ATLAS Pellet Stove Boiler

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1. Introduction

ATLAS Pellet Stove Boiler is an advanced biomass central heating appliance engineered with an integrated water jacket to function on a true water-heating boiler principle. This premium system is designed for direct integration into central hydronic networks, delivering high-efficiency thermal energy. By connecting seamlessly to radiators, underfloor radiant tubing loops, fan coil units and domestic hot water (DHW) or thermal storage buffer tanks, the ATLAS ensures even, balanced warmth comfort throughout your entire facility.

2. Safety Instructions

- ATLAS pellet boiler system must only be installed and commissioned for the first time by an authorized technician to ensure safe, economical, and code-compliant operation.
- Never modify any component of the hydraulic heating loop, combustion chamber, or flue gas exhaust infrastructure.
- The appliance must be electrically bonded to a dedicated system equipped with an effective earth grounding conductor to prevent electrical shock.
- The installation site must maintain strict minimum safety clearances away from walls and flammable materials as detailed in this manual; never place clothes, furniture, or combustible materials on or near the boiler jacket.
- Under no circumstances should the boiler be ignited or operated with the front fire door open or if the ceramic viewing glass is cracked or broken.
- Never wash the boiler chassis with water or liquid spray, moisture entry into the enclosure can permanently destroy internal electronics and create an immediate electrical shock hazard.
- Primary structural surfaces (glass, door handle, and flue piping) become extremely hot during operation; always utilize temperature-resistant safety gloves and proper technical tools during adjustments.
- Keep the top pellet bunker cover closed securely at all times during operation to ensure proper fuel feed isolation.

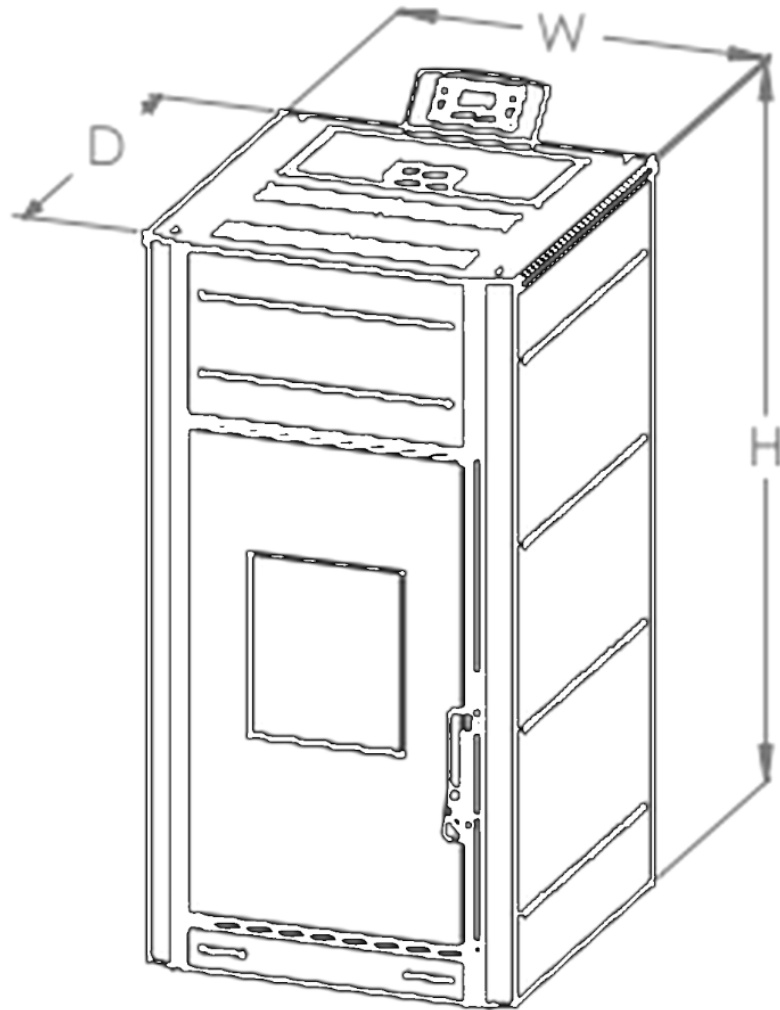
2.1 Maintenance and Emergency Procedures

- In the event of a chimney or flue pipe fire, immediately power off the unit via the digital control panel, disconnect the main power supply cord and keep the front door tightly shut.
- Instantly power down the boiler if you detect a systemic error code, component failure or operational malfunction.
- The entire ATLAS boiler system and its corresponding flue exhaust piping must undergo a comprehensive technical inspection and deep cleaning by a qualified service specialist at least once per year.
- Any structural intervention, repair or component replacement must be performed using original factory-authorized spare parts, utilizing non-genuine components invalidates the warranty and poses severe operational risks.

3. Technical Specifications

Feature	Specification	
	ATL65	ATL120
Heating Capacity	65K BTU	120K BTU
Maximum Water Temperature	194 °F	194 °F
Fresh air pipe	2 3/8'	3"
Water Connection	1"	1 1/4"
Electrical consumption	60W (Operation) /310W (Ignition Peak)	
Electrical supply	120 V 60 Hz	
Working pressure	7.3 – 29.0 PSI	
Working at environment temperature	41 °F – 104 °F	
Temperature of the flue gas	264 °F	285 °F
Weight	170 Kg	190 Kg

4. Appearance and Dimension



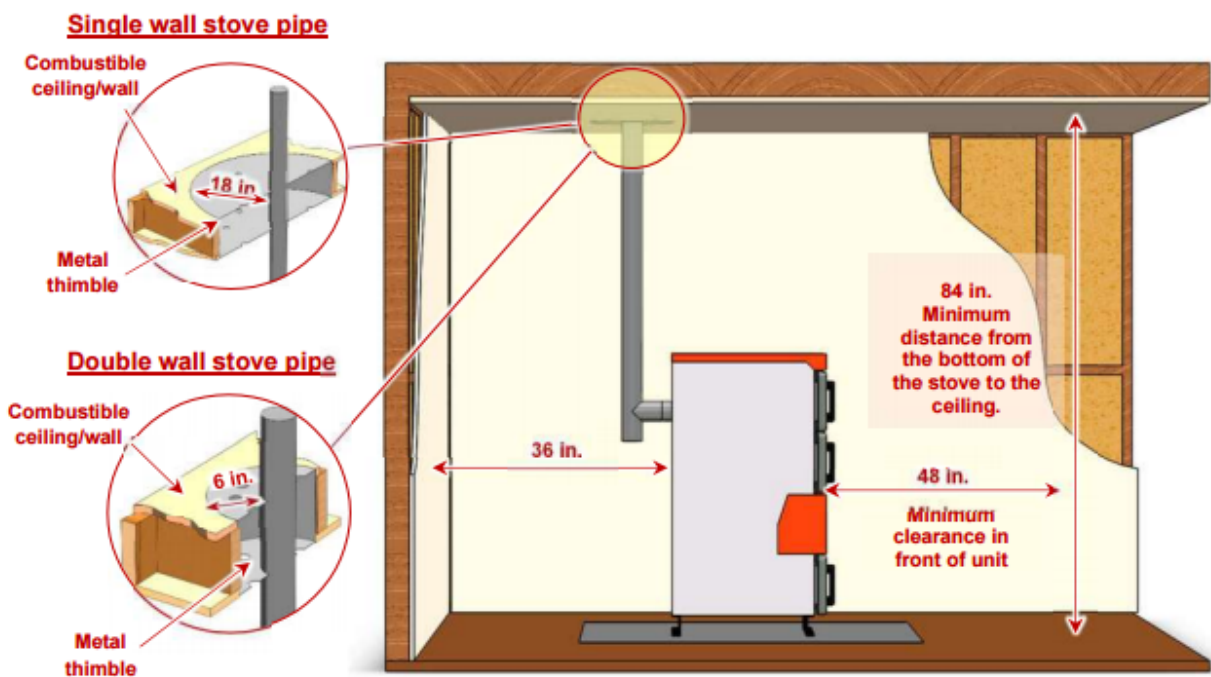
Model	Height	Width	Depth
ATL65	44 1/2"	23"	23 13/16"
ATL120	46 7/16"	24 5/8"	25 3/8"

5. Installation

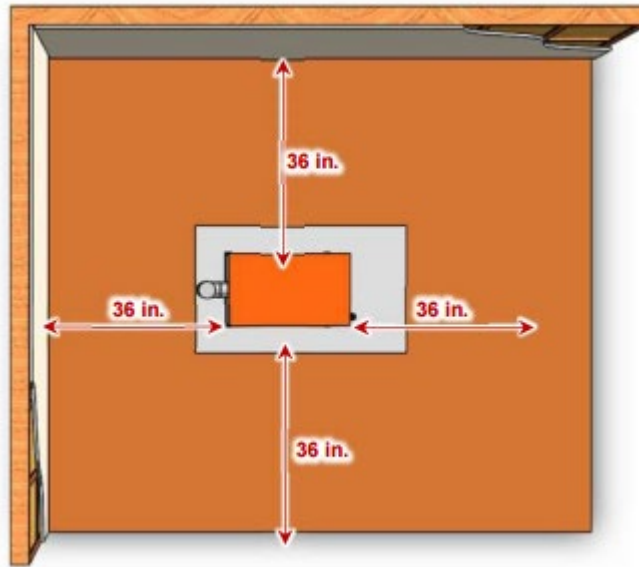
5.1 Standard Clearances Without Protection Wall

Prior to installation, load capacity of the place where the stove will be intended must be ensured. To ensure the correct and safe operation of the boiler, installed near combustible walls or ceilings, the minimum required clearance is:

- 36 in. (900 mm) – from all sides of the appliance (back, sides and corners).
- 48 in. (1219 mm) – from front of the stove.
- 84 in. (2130 mm) – minimum ceiling height, measured from floor to ceiling.
- 6 in. (150 mm) – from double-wall chimney pipe to combustibles.
- 18 in. (450 mm) – from single-wall chimney pipe to combustibles.



Minimum clearances for uncertified stove with sheet metal jacket or casing (no protection wall)



Clearance to Combustible Walls stove with sheet metal jacket or casing (no protection wall)

5.2 Standard Clearances with a Protection Wall

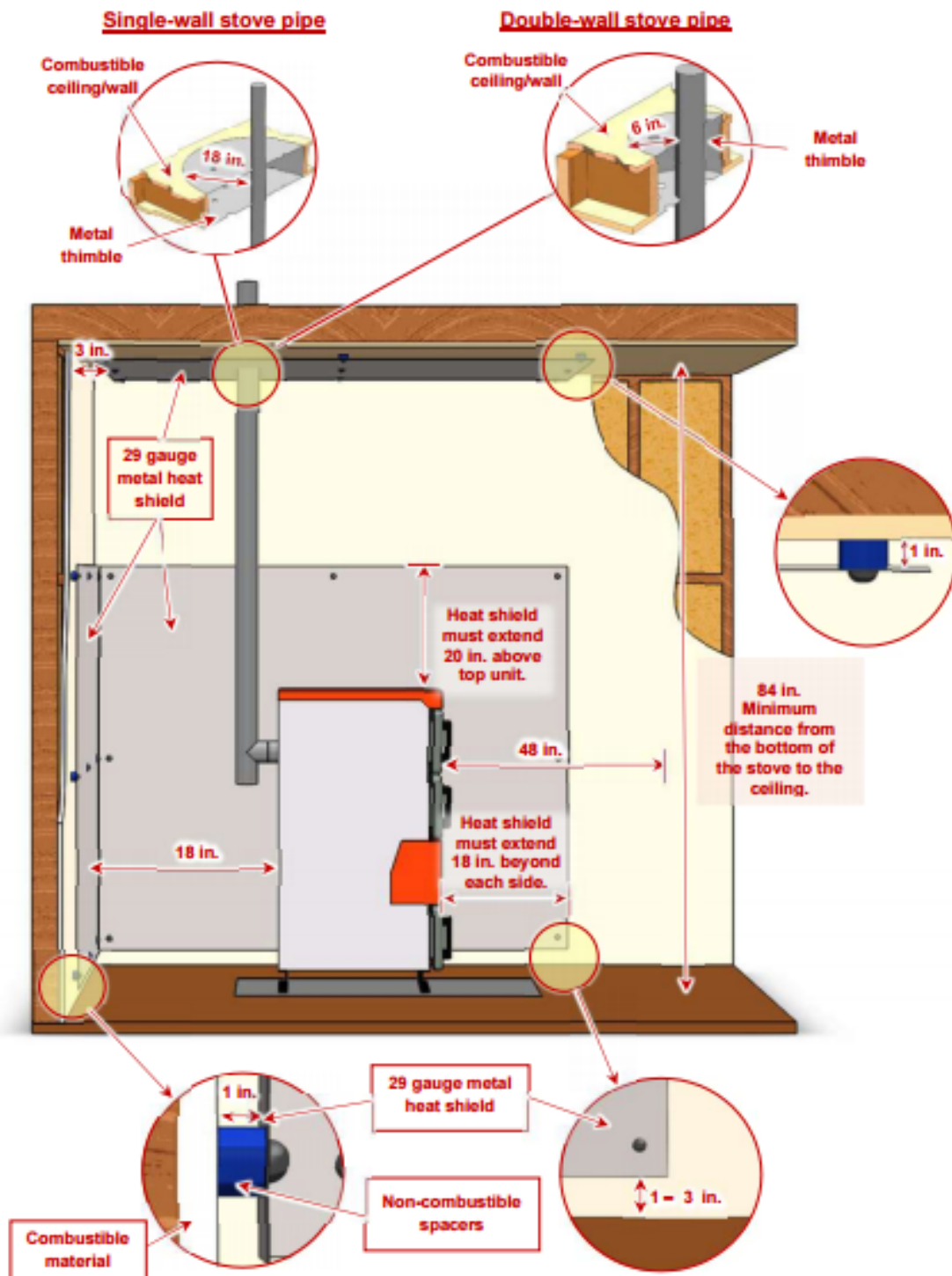
When a properly constructed 29-gauge sheet metal heat shield is installed with a 1 in. (25 mm) air gap, clearances may be reduced under CSA B365 rules.

5.2.1 Heat Shield Construction Requirements

- Minimum air space between shield and wall/ceiling: 1 in. (25 mm).
- Clearance at bottom of shield: 1–3 in. (25–75 mm).
- Clearance at top of shield: minimum 3 in. (75 mm).
- Shield must extend:
 - 20 in. (500 mm) above the top of the unit.
 - 18 in. (450 mm) beyond each side of the unit.
- Ceiling shields: maintain 3 in. (75 mm) edge clearance.
- Mounting hardware must allow full vertical ventilation and not transfer heat directly to combustibles.

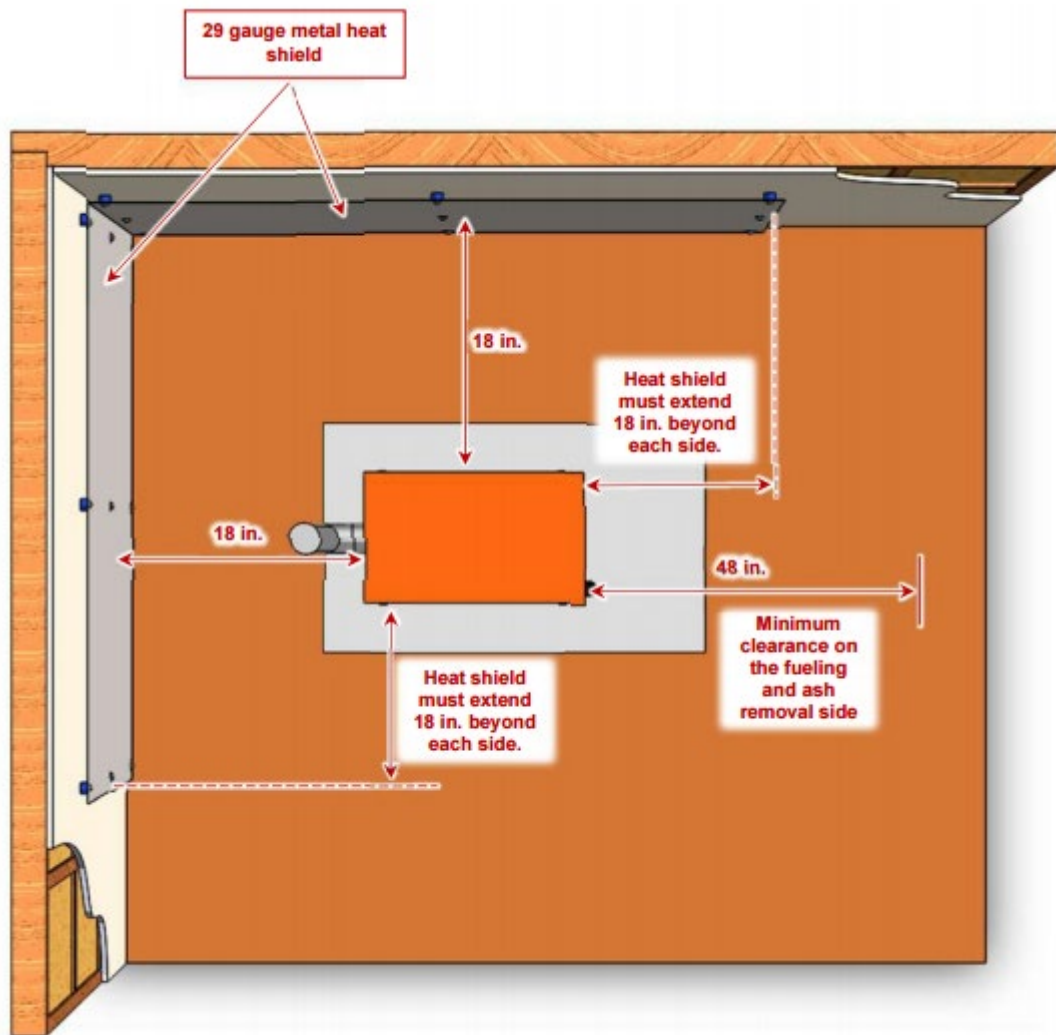
5.2.2 Functional Principle

The heat shield creates a ventilated air space, allowing heat to dissipate before reaching combustible surfaces. This reduces the minimum required clearance safely



Minimum clearances for uncertified stove with sheet metal jacket or casing (with protection wall)

ATLAS Pellet Stove Boiler



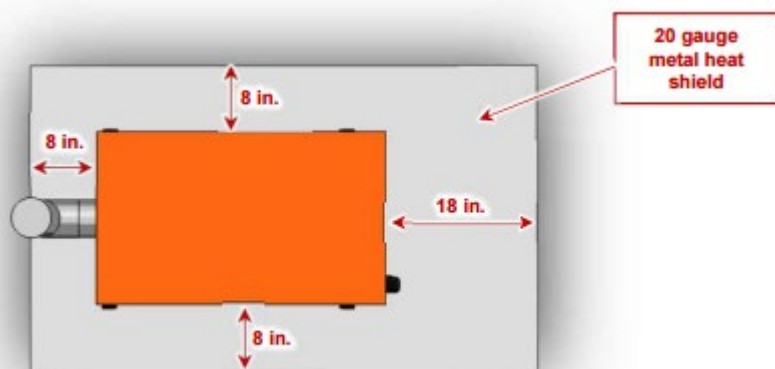
Clearance to Combustible Walls for stove with sheet metal jacket or casing (with Protection Wall)

5.2.3 Floor Protection

Ensuring proper floor protection for uncertified wood stove the floor must be protected with two elements:

A. Floor Pad (Ember Protection): Protects against live embers and sparks that may fall during fire tending or ash removal.

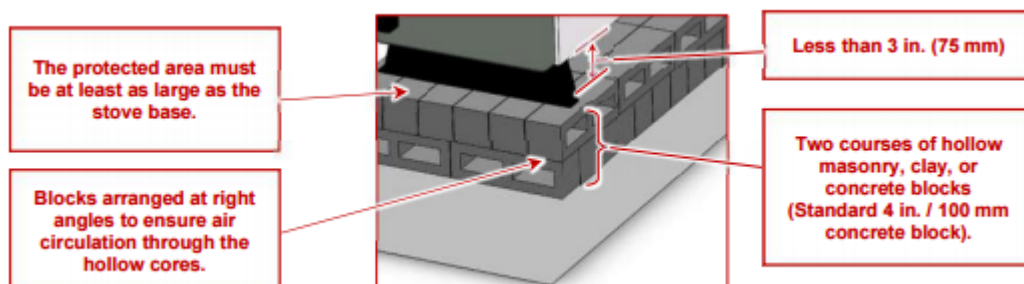
- The floor pad must be made of continuous non-combustible material (e.g., ceramic tile, flagstone, brick, or block).
- It must extend 18 in. (450 mm) beyond any side with a loading door and 8 in. (200 mm) beyond all other sides.
- All joints between tiles or stones must be properly grouted or mortared to prevent debris accumulation and ensure a continuous surface.



Floor Pad Dimensions for Uncertified Units (Ember Protection)

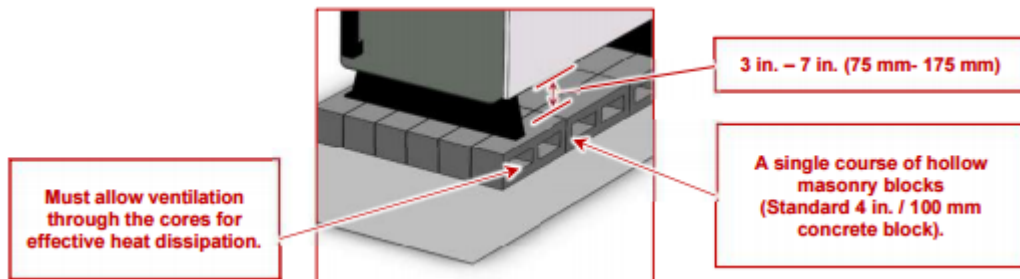
B. Heat Shield or Thermal Protection (Overheating Protection): Prevents the floor from overheating due to heat radiation from the stove's base. The required construction depends on the clearance between the bottom of the appliance and the floor.

Option 1 – Clearance less than 3 in.

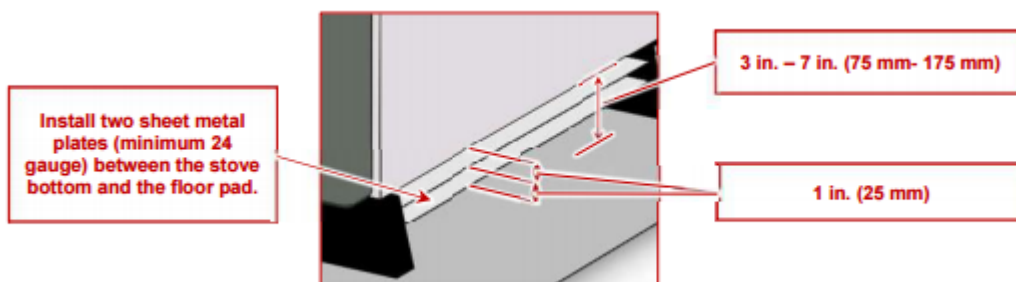


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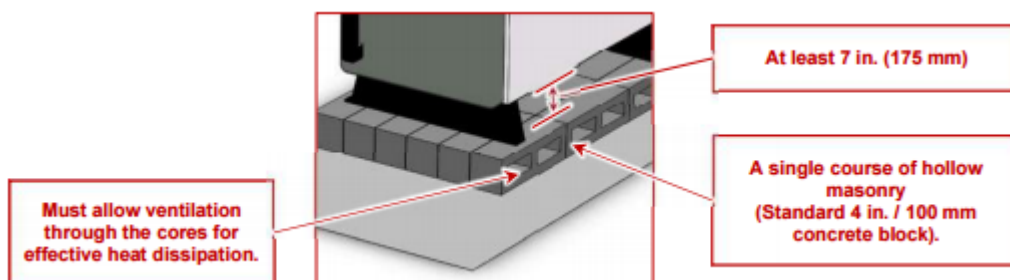
Option 2 – Clearance between 3 in. and 7 in. – Hollow



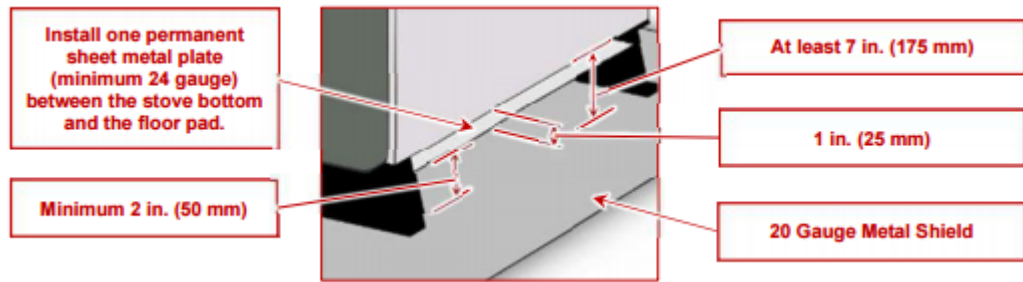
Option 2.1 – Clearance between 3 in. and 7 in. – Metal Plates



Option 3 – Clearance greater than 7 in. – Hollow Masonry



Option 3.1 – Clearance greater than 7 in. – Metal Plates



5.3 Summary

5.3.1 Summary of Clearance and Floor Protection Requirements for boilers with Sheet Metal Jacket or Casing – Burning Units.

Requirement	Without Wall Protection	With Wall Protection (29-Gauge Metal Heat Shield)	Notes
Ceiling Clearance	60 in.	84 in. from the bottom of the stove to the top of the ceiling.	No reduction permitted under 84 inches ceiling height. Heat shield must extend 20 In. above stove.
Side /Back Clearance	36 in	18 in.	Heat shield must extend 20 in. above and 18 in. beyond appliance sides.
Front Clearance (Fueling and Ash removal side)	48 in	48 in.	No reduction permitted.
Single-Wall Stove Pipe	18 in.	18 in.	Must use non-combustible thimble through walls/ceilings.
Double-Wall Stove Pipe	6 in.	6 in.	Certified double-wall Only.
Floor Pad (Ember Protection)	Extend 18 in. in front of loading door and 8 in. on other sides	Extend 18 in. in front of loading door and 8 in. on other sides	Must be continuous non-combustible surface.
Thermal Floor Protection (Overheating Protection)	Required (depends on clearance under stove)	Required (depends on clearance under stove)	Options described below.

5.3.2 Floor Protection Options (Thermal Overheating Protection)

Clearance Under Stove	Protection Option	Description
Less than 3 in.	Option 1	Two courses of hollow masonry/concrete blocks (100 mm thick), arranged for airflow
3–7 in.	Option 2	Single course of hollow masonry units with ventilated cores
	Option 2.1	Two sheet metal plates (min. 24 gauge), spaced 1 in. apart
More than 7 in.	Option 3	Single course of hollow masonry units with ventilated cores
	Option 3.1	One permanent sheet metal plate (min. 24 gauge), 2 in. above floor pad and 1 in. below stove bottom

5.4 Installation

The boiler with water jacket operates on water heating boiler principle. The advantage of this type of heating system is the maximum utilisation of the heat that is produced during the combustion process. With this method the heat from the combustion chamber is taken to remote and hard to reach for a normal heat exchange premises in order to maintain an even temperature and warmth comfort.

- Ensure that every branch and element of the installation is airtight at every single moment of its exploitation.
- All elements of the installation must be protected from freezing, especially if the or other parts are situated in non-heated premises.
- The first service cleaning of the pump's filter must be done immediately after testing the installation.
- If an old installation is going to be used it must be washed several times to ensure the removal of any accumulated dirt on the surfaces of the water jacket.
- Do not drain the circulating water of the installation during the non-heated season.
- Chemical treatment of the circulating water is not recommended.
- The filling or unloading of the system is done via a hose through a facet mounted in the lowest area.
- Mounting an expansion vessel is permitted when constructing a closed type system.
- The warranty is not valid in case of a stove with a swollen water jacket which is a result of pressure increase in the system and improper connecting.
- It is advisable to check the water quality and provide treatment if the water is very hard, have pollution or some other deviation.

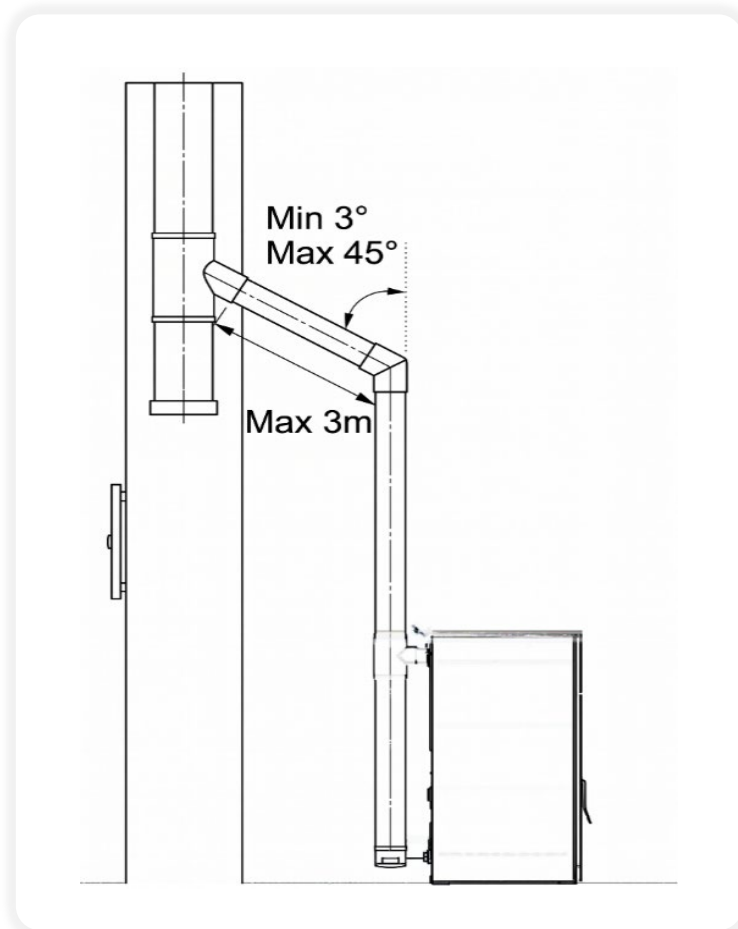
5.5 Connecting to Chimney

For the assembly of the flue pipes the use of non-flammable materials, fire and condensation resistant products is obligatory. The assembly must be performed in such a manner so it guarantees the airtight sealing and prevents condensation. If possible, avoid adding horizontal sections. Direction shift is done by using knee joints with a max angle of 45°.

For heating devices equipped with a smoke ventilator, the following instructions must be observed:

- Horizontal sections must have a minimum incline of 3° upwards;
- The length of the horizontal sections must be as short as possible, but without exceeding 3 m;
- More than four direction shifts are forbidden, including the cases where a T-shaped element is used;
- The flue components must be airtight and to be insulated if extending outside the premises in which the fireplace is installed.
- The flue components must allow a soot cleaning.

The flue components must have a constant section. A diameter change is allowed only in the chimney joint.

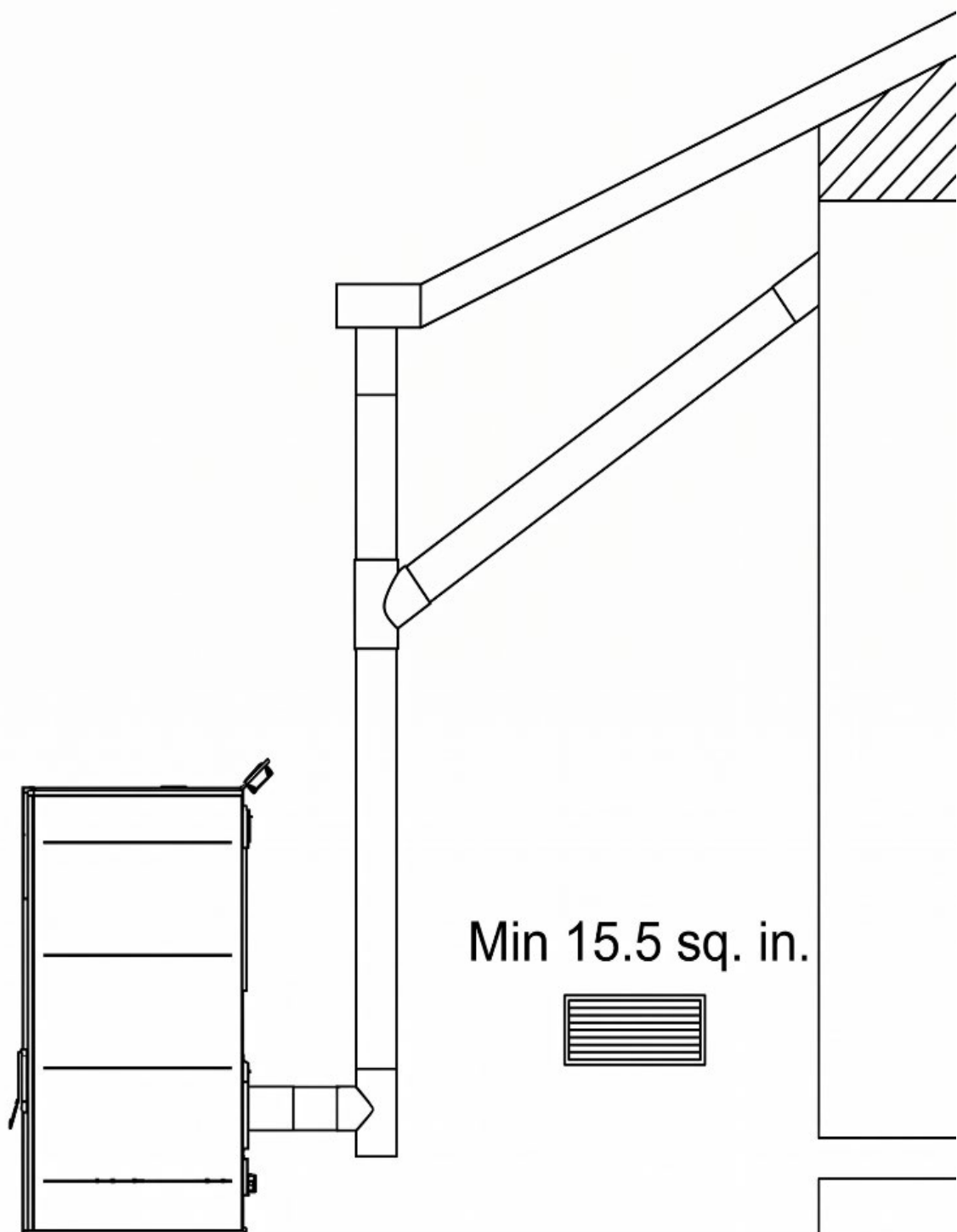


WARNING

In case of a fire hazard turn off the product from the display. This will stop the oxygen flow.

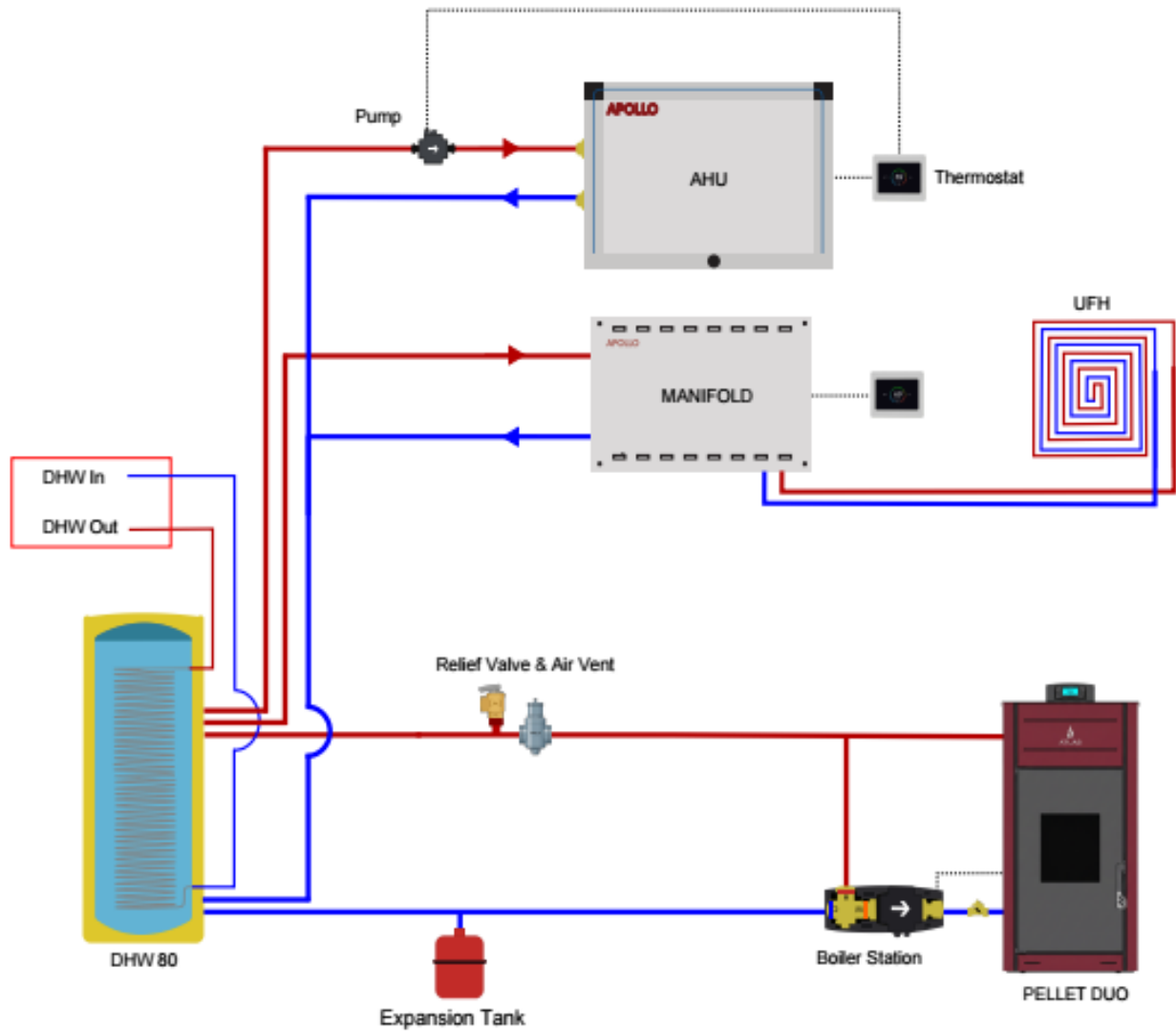
5.6 Air Inlet

The suction pipe is placed at the rear and has a circular cross-section. The combustion air can be aspirated from the room, as long as it is close to an air intake connected to the external wall with a minimum area of 15.5 sq. in., correctly positioned and protected by a grille.

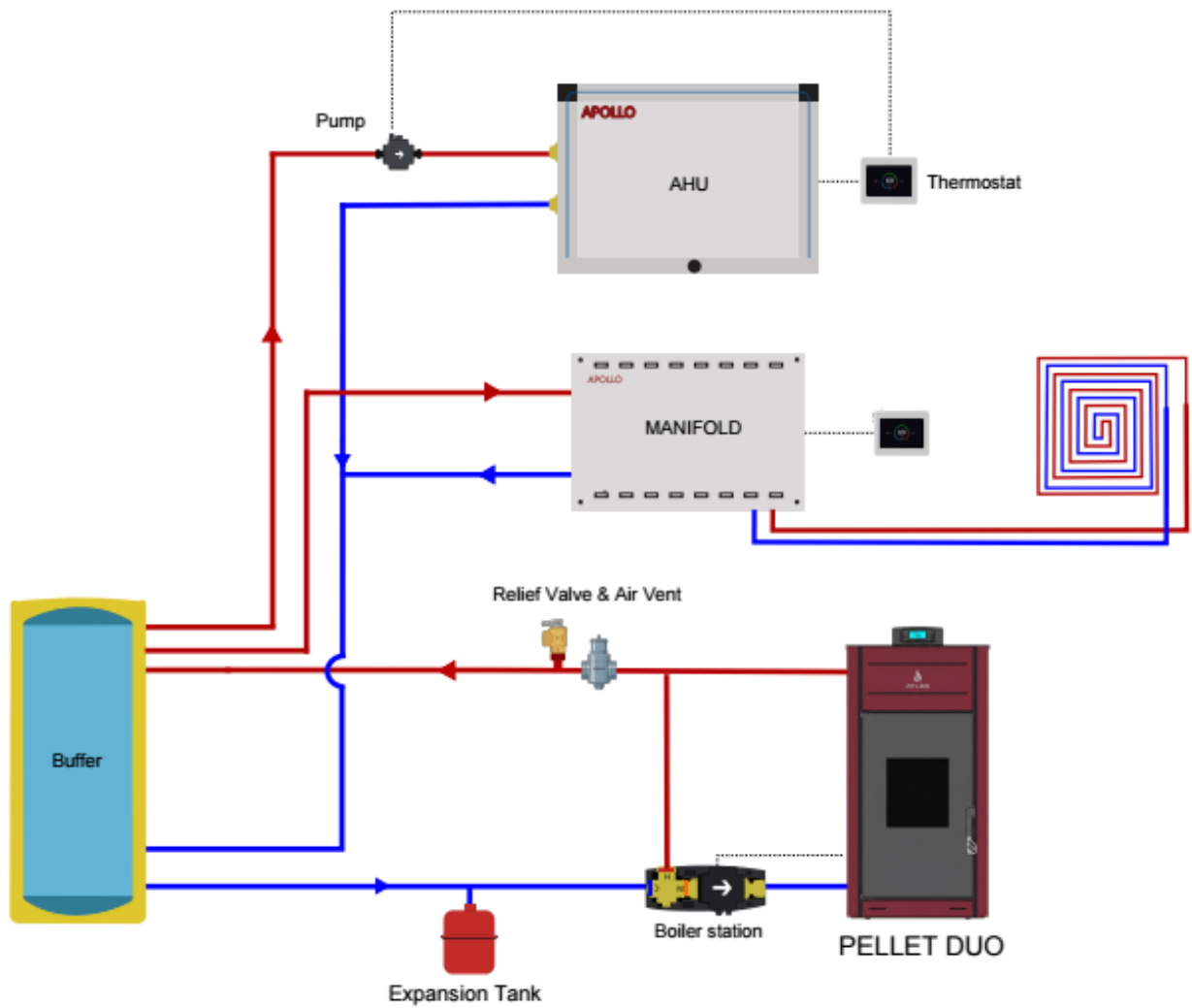


5.7 Schematics

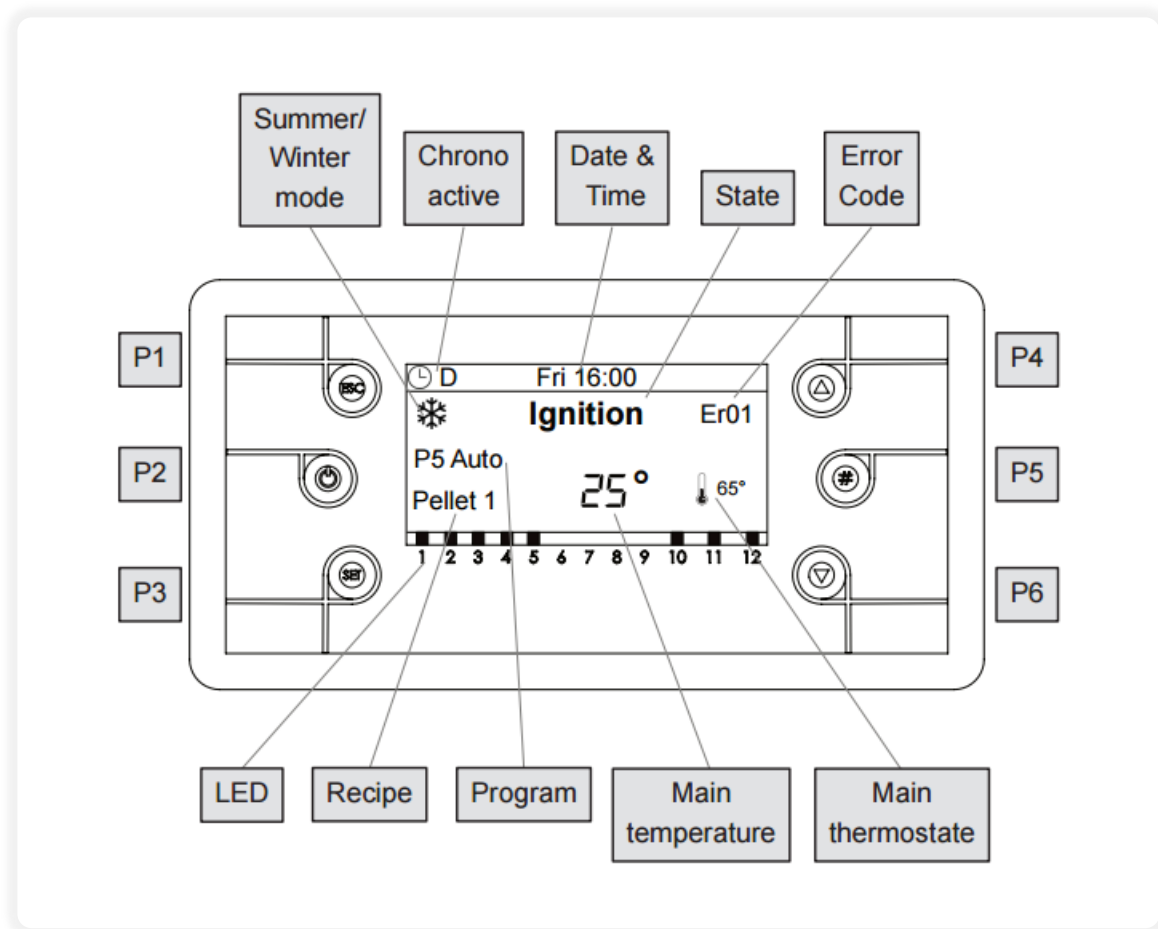
Option 1: Pallet DUO + DHW + AHU + Radiant



Option 2: Pellet DUO + BUFFER + AHU



5.8 Display

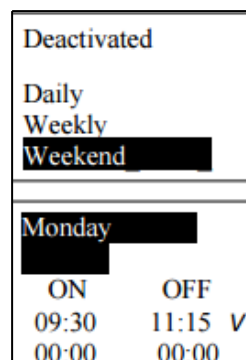


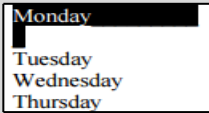
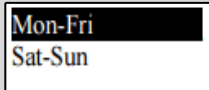
Button	Function
P1	Exit Menu/Sub-menu
P2	Ignition and extinguishing (push for 3 seconds), Reset errors (push for 3 seconds), Enable/Disable Chrono
P3	Enter in User Menu 1/sub-menu, Enter in User Menu 2 (push for 3 seconds), Save data
P4	Enter in Visualisations Menu, Increase
P5	Enable Chrono time slot
P6	Enter in Visualisations Menu, Decrease

LED	Function	LED	Function
D1	Igniter ON	D9	Auger On
D2	Auger ON	D10	Lack of material in the tank
D3	Pump ON	D11	Room Thermostat/Remote Keyboard room thermostat reached
D4	V2 ON Output	D12	Domestic Hot Water Demand

5.8.1 Menu

5.8.1.1 User Menu 1

Power	Combustion By entering this menu you can modify the combustion power of the system. It is possible to set it in automatic or manual mode: in the first case the system selects the combustion power, in the second case the user selects the desired power.	
	Heating By entering this menu you can modify the heating power. It is possible to set it in automatic or manual mode: in the first case the system selects the combustion power, in the second case the user selects the desired power. If no output has been set as Heating Fan or if you set the parameter A04 = 1 the menu is not displayed.	
Thermostats	Boiler Menu to change the value of the Boiler Thermostat. The minimum and the maximum value can be programmed by setting the related Thermostats Th26 and Th27.	
	Local Room This menu allows you to modify the value of the Room Thermostat. It is displayed only if an input has been set as Room Probe or if the radio control 2Ways2+ has been enabled or if a TriKey is included.	
	DHW This menu allows you to modify the DHW Thermostat. It is displayed if an input has been set as DHW/Buffer tank Probe and a hydraulic system including a DHW Buffer tank has been selected.	
	Buffer Tank This menu allows you to modify the value of the Buffer tank Thermostat. It is displayed if an input has been set as DHW/Buffer tank Probe and a hydraulic plant including a Buffer tank has been selected.	
Recipe	This Menu allows the selection of the Combustion Recipe; if you set the parameter P04 = 1 the menu is not displayed.	
Chrono	It allows you to program and enable the Ignitions/Extinguishings of the system. It is formed by 2 submenus.	
	Mode It allows you to select the mode of your choice, or to disable all the schedules. • Enter in edit mode by clicking P3 • Select the mode (Daily, Weekly or Weekend) • Enable/disable the Chrono mode by clicking P2 • Save the new settings with the key P3	

	Program The system includes three type of programming: Daily, Weekly, Weekend. After selecting the program of your choice: • Select the programmed time clicking P6 or P4 (P5 or P4 for K100) • Enter the edit mode (the selected time blinks) with the button P3 • Edit the times clicking P6 or P4 (P5 or P4 for K100) • Save the new settings with the button P3 • Enable (a "V" is displayed) or disable the time slot (a "V" is not displayed) pushing the key P5 (P2 per la K100) Daily Select the day of the week of your choice and set the ignition and extinguishing times. Program across midnight Set the ON time of the previous day to the value of your choice: Ex. 20.30 Set the OFF time of the previous day to 23:59 Set the ON time of the following day at 00:00 Set the OFF time of the following day to the value you prefer: Ex. 6:30 The system will turn on Tuesdays at 20.30 p.m. and will be extinguished on Wednesdays at 6.30 a.m. Weekly The programs are the same for all the days of the week. Weekend Choice between the slot Monday-Friday and Saturday-Sunday and set the Ignition and Extinguishing times	 
Refill	This Menu allows you to calculate the used fuel and the amount of remaining pellet in the tank. You have 4 charge levels: 100% (full tank), 75%, 50%, 25%, and 0 (disabled function). For a correct functioning the manufacturer has to set the parameters P111 and P112.	
Soft Mode	Menu to switch on and off the Soft Mode. The menu is displayed if at least one of the parameters P61, P62, P63, P64, P65, and P66 is set to a value different from zero.	
Loading	The procedure activates the manual pellet loading and will stop automatically after 300 seconds. The system must be in Off for the function can be activated. Only for local control panel.	
Loading Test	Use this procedure to set the value of the parameter P112 of the Refill function. The procedure allows you to calculate the amount of pellet used in 10 minutes with the auger value of P05/2. The system must be into Off to carry out the measurement	
Remote Keyboard (only for remote control panel; it is displayed if A52 > 0)	Activation Thermostat It allows switching on/off the Room Thermostat functioning. Room Thermostat Menu to modify the remote keyboard Room Thermostat value.	

6. Cleaning Procedure

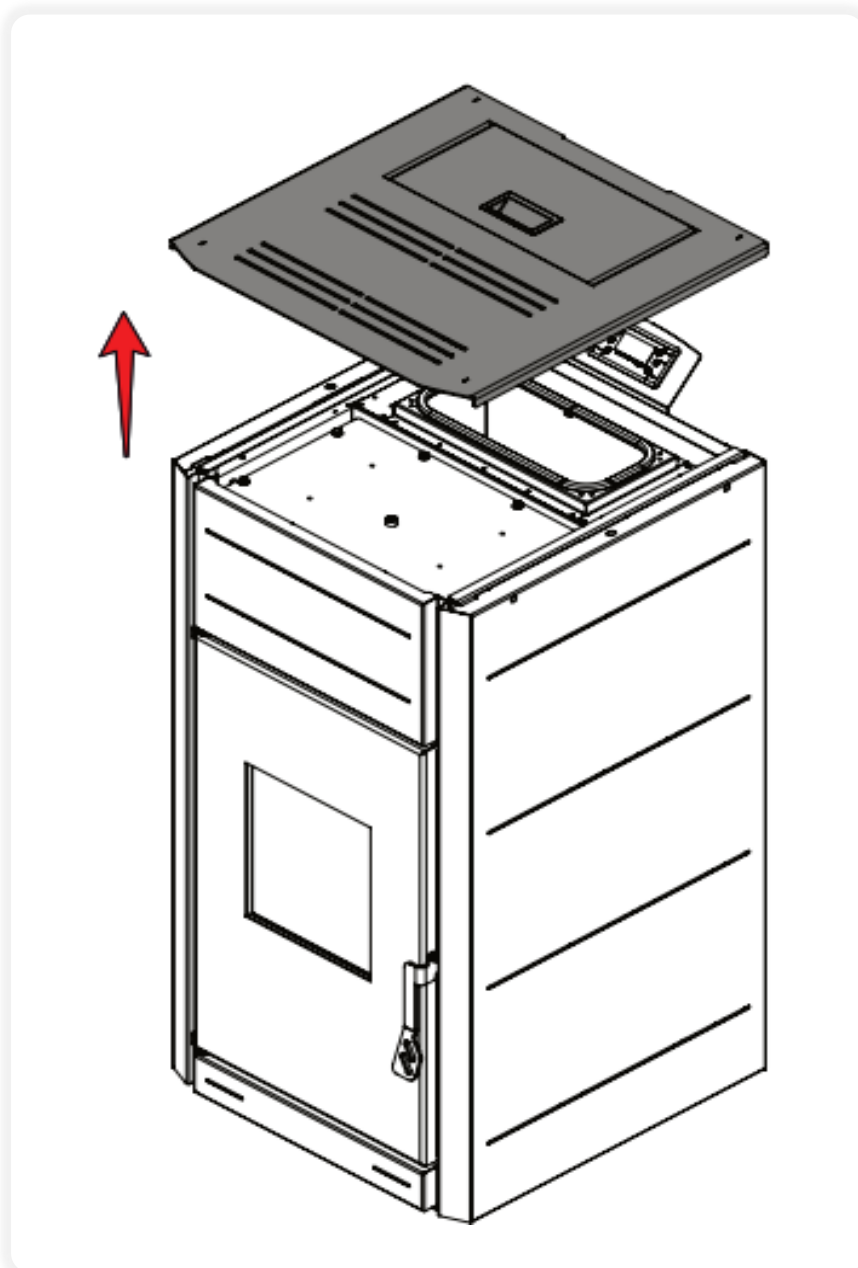


CRITICAL SAFETY WARNING

Before executing any maintenance or cleaning procedures, ensure that the boiler is completely switched off, disconnected from the primary power grid and fully cooled down to ambient room temperature. Always use a specialized ash vacuum cleaner designed for biomass systems, never use a standard household vacuum cleaner.

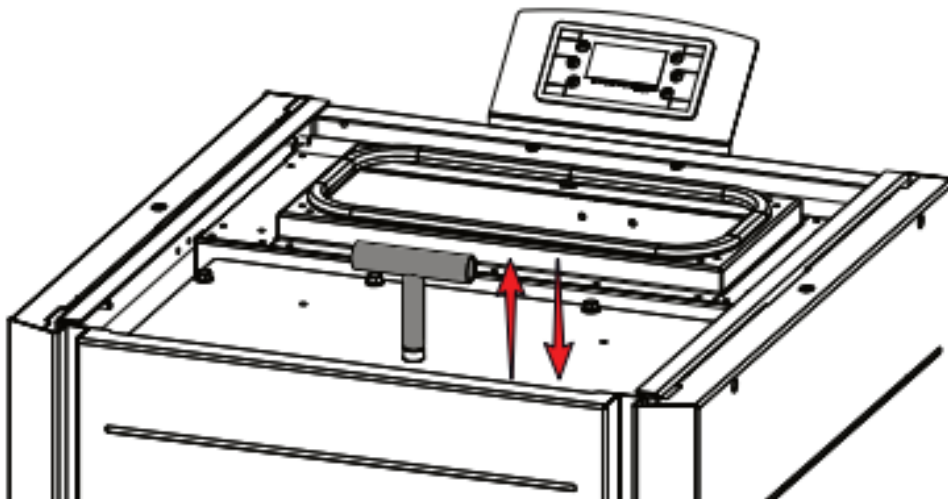
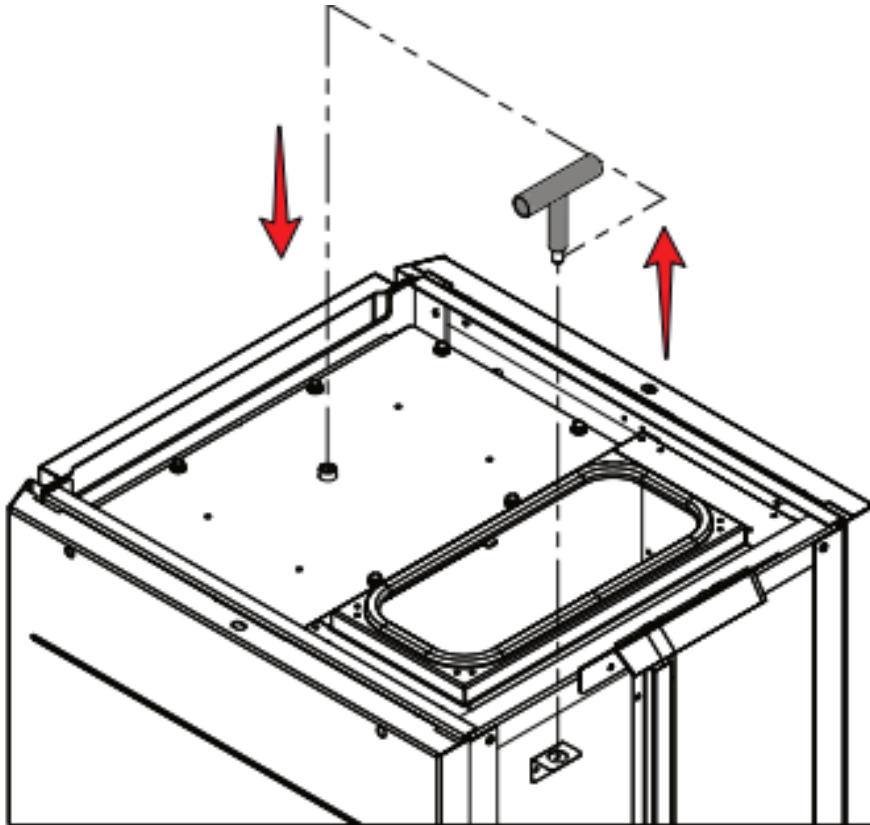
Step 1: Top Cover Removal

Lift and remove the top cover plate from the boiler assembly to gain direct access to the underlying heat exchanger inspection manifold



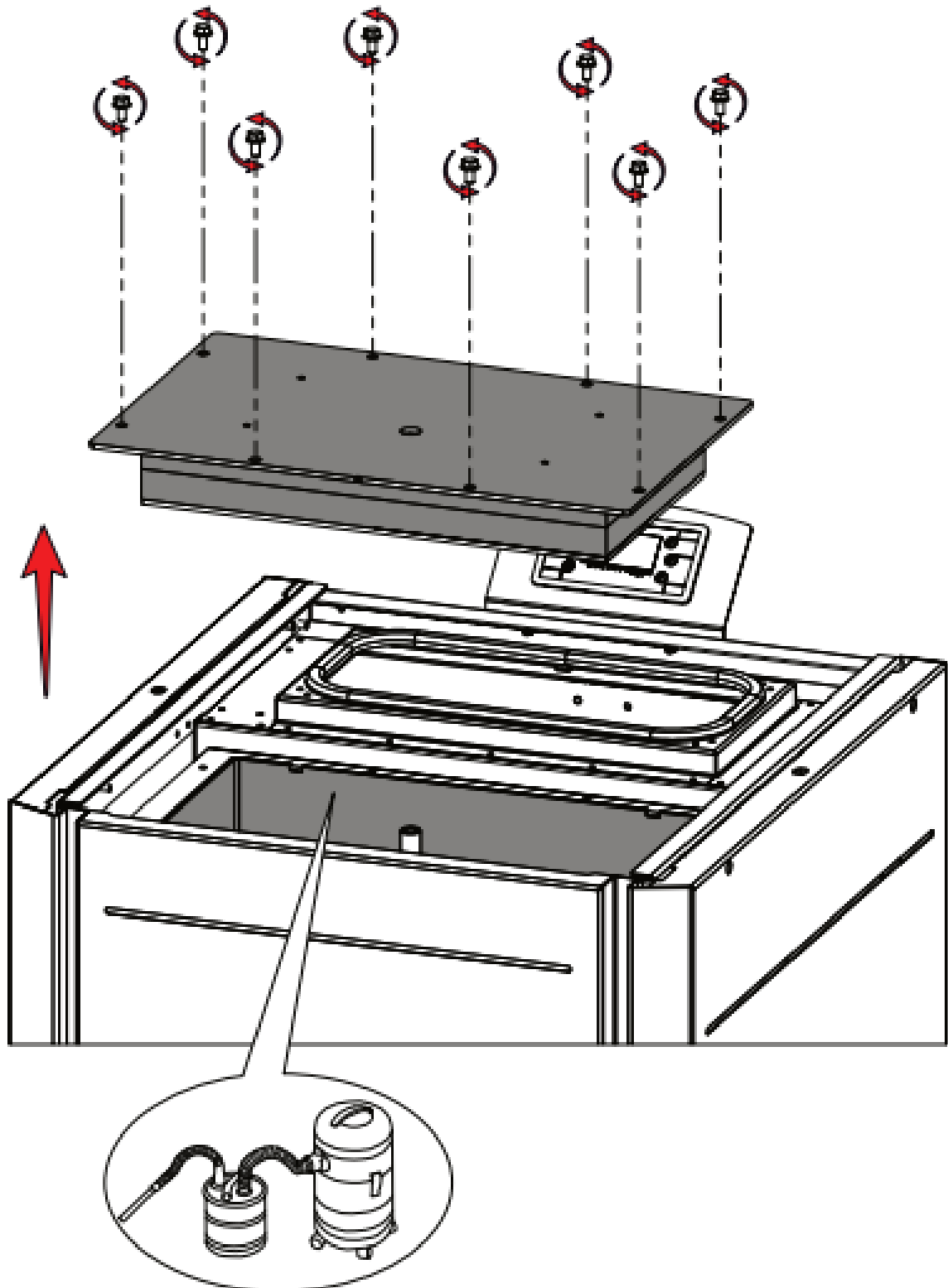
Step 2: Manual Turbulator Scraper Cycle

Locate the specialized technical T-handle tool provided with the unit. Screw the handle into the internal cleaning bar mechanism and manipulate it firmly up and down several times to scrape off ash layers bonded to the turbulator fins.



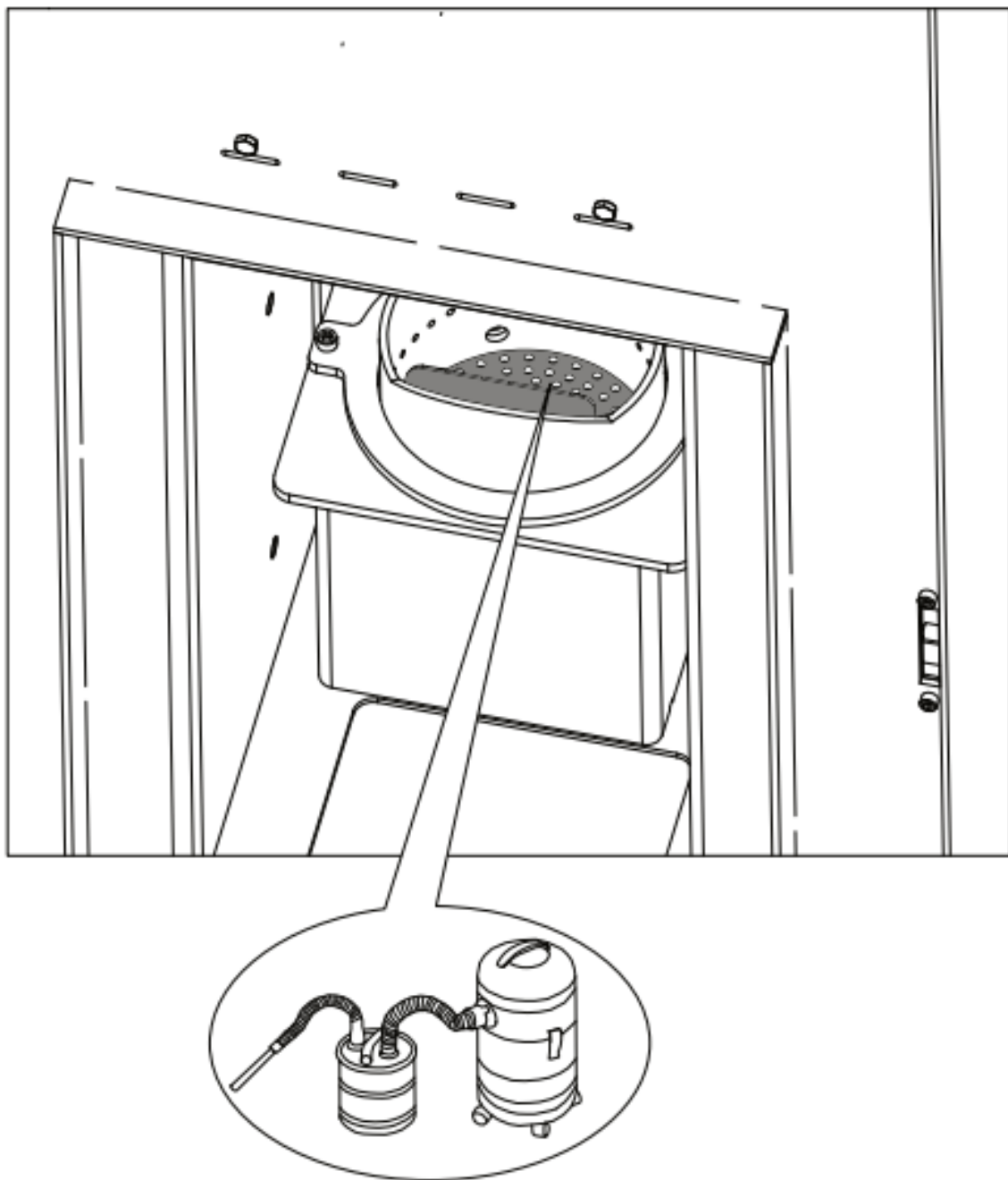
Step 3: Deep Manifold Channel Clearing

Unscrew by hand the eight locking bolts securing the heat exchanger turbulator top plate and remove the lid. Insert your ash vacuum nozzle deep into the exposed channels to evacuate fine powder and soot accumulated during prolonged operation.



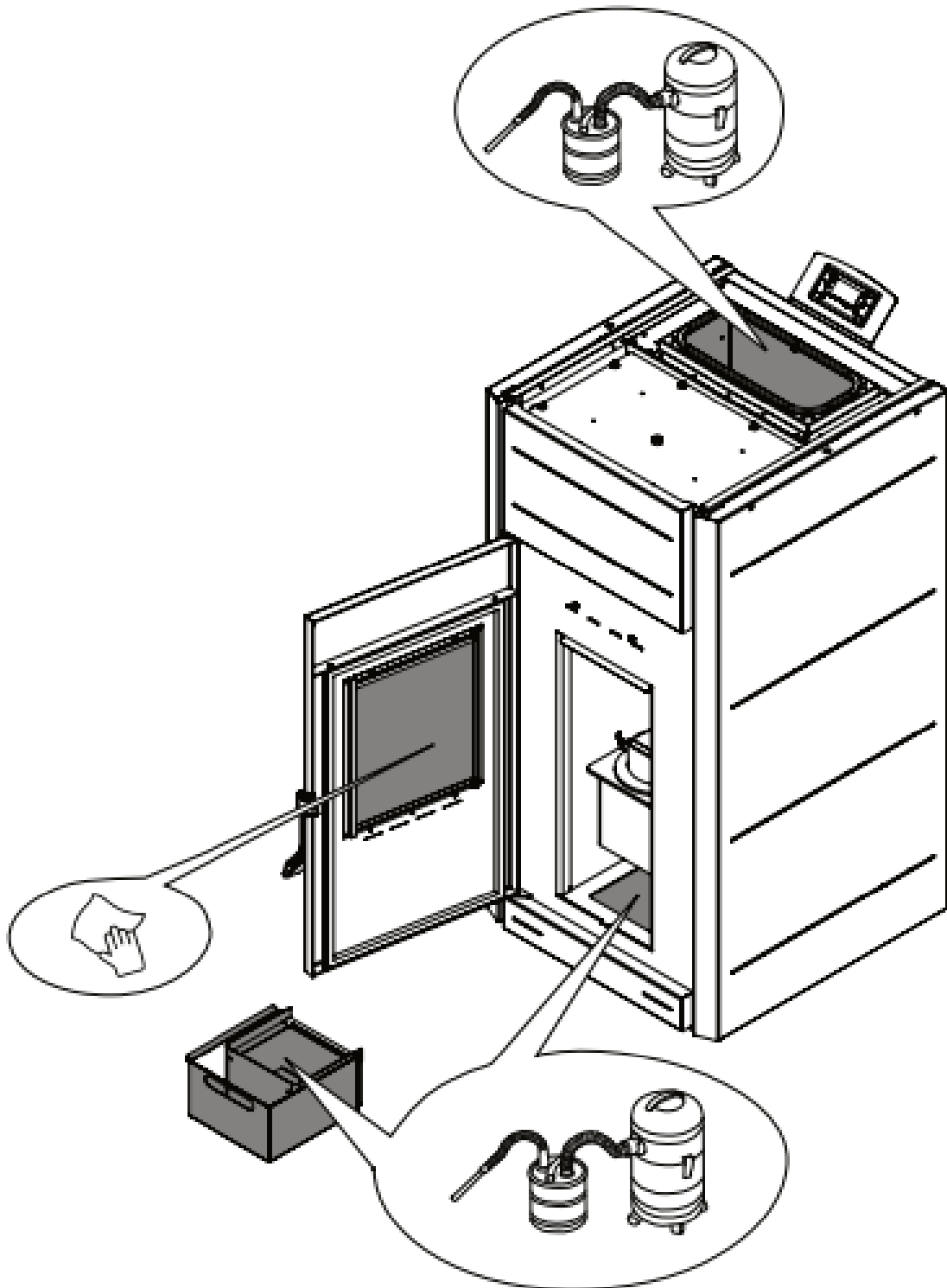
Step 4: Combustion Chamber Evacuation

Unlatch the front heavy-duty fire door. Use your ash vacuum cleaner to thoroughly extract slag, ash deposits and debris from the internal combustion box and the primary perforated stainless steel burn pot.



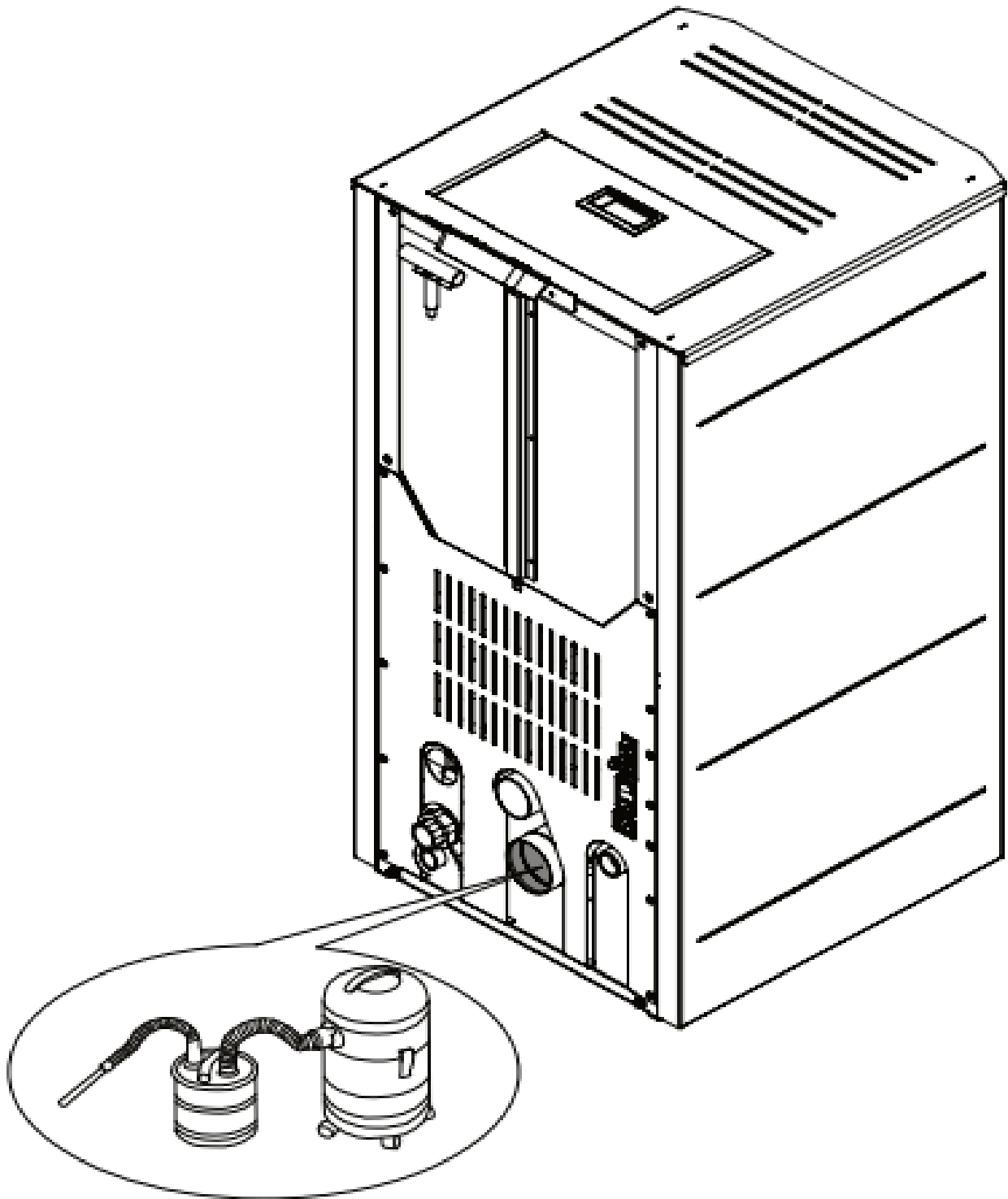
Step 5: Hopper, Component Enclosure, and Ceramic Glass Cleaning

1. Vacuum out accumulated wood pellet dust from the bottom of the fuel hopper to avoid auger motor binding.
2. Slide out the modular lower ash tray drawer, empty it into an airtight metallic waste bin, and vacuum out the surrounding inner dust compartment.
3. Wipe down the fire door viewing glass using a soft, non-abrasive microfiber cloth to ensure visibility of the internal flame core.



Step 6: Flue Gas Fan Outlet Sweeping

Access the rear exhaust manifold of the appliance. Direct the ash vacuum wand inside the circular flue gas fan outlet terminal pipe to eliminate soot blockages, preserving target draft performance and avoiding airflow restriction alarms.



7. Troubleshooting Guide

Error Code	Reason	Solution
Er01 High voltage error1	The temperature of the water is above the maximum for safety.	Boiler will automatically turn off. Wait for it and check the water pump for malfunction. Check water safety protection and reboot it by pressing it. This error will not disappear or let you start the product before that.
Er02 High voltage error2	High temperature in the pellet hopper caused by poorly cleaned fire pot, sensor malfunction or backfire to the fuel bunker by any reason.	Follow the cleaning procedure described in this manual and check for stuck fuel. If the error continues contact your technician.
Er03 Low flue gases temperature	Poor quality pellets, lack of pellets in the hopper, wet pellets.	Check the quantity and quality of the pellets. Check the fuel pot for clogging and the fuel bunker for dust.
Er04 High water temperature in the water jacket	Pressure drop in the installation. Circulation pump malfunction. Badly vented installation.	Check the system for leaks. Check the circulation pump. Check if there is something blocking the air inlet at the room.
Er05 High flue gas temperature	Uncleaned boiler. Sensor malfunction.	Follow the cleaning procedure described in this manual. If this does not help contact your technician.
Er07 Encoder error	Encoder does not receive signal or fan failure. Broken encoder.	Check the fan cable for damage. Try to disconnect and connect the fan cable.
Er08 Encoder fan error. Fan speed control failed.	The fan cannot reach the set speed. Defective fan. Problem with the electronics. Low voltage of the power grid.	Check the fan cable for damage. Try to disconnect and connect to power grid.
Er09 Low system pressure	The pressure in the system is lower than the minimum for normal exploitation.	Check the water level in the system. Check for leaks.
Er10 High system pressure	The pressure in the system is higher than the maximum for normal exploitation.	Check the system.

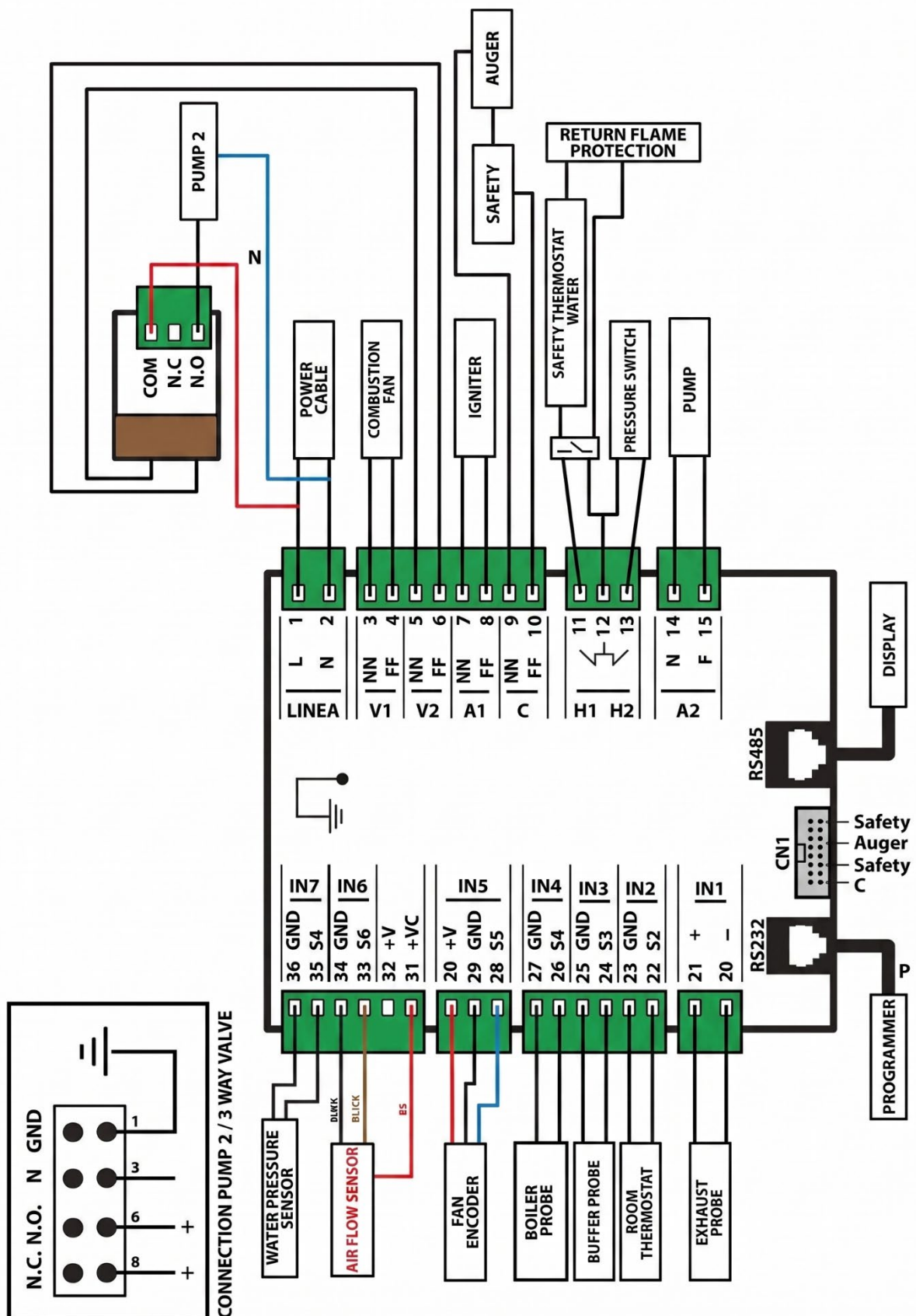
Error Code	Reason	Solution
Er11 Electronics get wrong data.	Due to a power failure the clock and date are not correct. Failure in the electronics.	Set the time and date correctly.
Er12 Ignition failed.	Igniter malfunction. Lack of pellets. Uncleaned fuel pot. Need of adjustment.	Visual inspection of the burning pot during start. Check the pellets quantity and if there is something blocking their way going down. Follow the cleaning procedure described in this manual for the fuel pot.
Er15 No power supply	Power failure during operation.	Clear the error and check if the pot is clean to continue the work process.
Er16 Error RS485 Communication connection	Faulty connection of the control board with the display or damaged cable between them.	Check the plug and the cables between the control board and the display.
Er23 Water temperature sensor.	Some of the temperature sensors of the stove or buffer is malfunctioning.	Check the sensors are in order. Check their connection to the board.
Er41 Minimum airflow.	Open door. Uncleaned boiler. Blocked or missing draft in the chimney.	Check the door and the seal on it. Follow the cleaning procedures described in this manual.
Er42 Maximum airflow reached	High pressure in the chimney.	Check the airflow sensor and the fresh air pipe. Please avoid to connect the fresh air pipe to exterior without a proper cap in the end.

7.1 Alarms

With any error the system goes into Block.

Description	Code
	LCD and K
Safety Thermostat Intervention HV1: signaling even when the stove is off.	Er01
Intervention of the Safety Pressure Switch HV2: signalling with Combustion Fan On.	Er02
Extinguishing for exhaust flue gas temperature decrease.	Er03
Extinguishing for water over temperature.	Er04
Extinguishing for exhaust flue gas over temperature.	Er05
Pellet Thermostat open (backdraft in the brazier).	Er06
Combustion Fan Encoder: lack of Encoder signal (if P25 = 1 or 2).	Er07
Combustion Fan Encoder: failed speed regulation (if P25 = 1 or 2).	Er08
Low water pressure (the error is not reported if the system is in Off or Block state and P1 Pump is Off).	Er09
Water over pressure.	Er10
Date/Time values are not correct due to a continuous lack of voltage power supply.	Er11
Failed Ignition.	Er12
Lack of voltage.	Er15
Communication Error RS485.	Er16
Failed Air Regulation.	Er17
Lack of fuel.	Er18
Boiler Probe or DHW/Buffer tank Probe open.	Er23
Cleaning Motor broken.	Er25
Flow meter broken.	Er39
Min air flow in Check Up (FL20) or in Run mode and Modulation (FL19) not reached.	Er41
Max Air Flow overreached (FL40).	Er42
Door Error.	Er44
Auger Encoder: lack of Encoder signal (if P81 = 1 or 2).	Er47
Auger Encoder: failed speed regulation (if P81 = 1 or 2).	Er48
Service Error. It reports the achievement of the planned operation hours in the 'Maintenance 1' function (parameter T66). It is necessary to call for service.	Service Er40

8. Control Board Wiring Diagram





**25 Continental Dr Unit C
Wayne NJ 07470
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